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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,927	12/03/2003	Matthew L. Heston	CIS0107D1US	4687
33031	7590	02/09/2006	EXAMINER	
CAMPBELL STEPHENSON ASCOLESE, LLP			TRINH, MINH N	
4807 SPICEWOOD SPRINGS RD.			ART UNIT	
BLDG. 4, SUITE 201			PAPER NUMBER	
AUSTIN, TX 78759			3729	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/726,927	Applicant(s) HESTON ET AL.	
	Examiner Minh Trinh	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-40 and 46-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-40 and 46-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II claims 28-48 in the reply filed on 12/5/05 is acknowledged. Non elected claims 1-27, 41-45 and 49-62 have been cancelled.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. It is suggested the phrase: "method and apparatus" (in the title) should be changed to: -- System--.

3. The abstract of the invention should have been revised to read on the system.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 28-40 and 46-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear as to what being referring as "first connector and second connector" (see claims 28, lines 2 and 3). Since, the specification only discloses the "optics connector" and "optics circuitry". Please clarify.

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Further, claims 46-48, recite "means for inserting insert the one or more pins" (claims 46-47, lines 3-4) is not clear as what being referring as: "means for inserting... ".
the phrase: "insert the one or more pins"(claim 46-47, line 3) should have been changed to:-- the at least one pin--.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 28-35 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by August et al (US 4,911,645).

August et al disclose the system for PCB's including a first PCB, 103 having contact 101 and connector 102, a second circuit board 105 (see Fig. 1, col. 4, lines 1-10) having second contact 101 and second connector 108 for mating with first connector 102 (see Figs. 1 and 4); a pin header 115 having at least one pin that passing through at least one hole 108's of the first circuit board 103, and the second circuit board 105 (see Fig.1, col. 3, lines 67-68) and the pins 115 is perpendicular to the first connector 102 of the first circuit board 103 (see Fig. 1).

As applied to claim 29, August et al teach the aligning the first and the second board by the through holes 108 (see Fig. 1 and the discussion at col. 2, lines 63-68) and

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the second connector is capable of moving along the vertical axis (or Y-axis) and the pin is extended along the Y-axis or first axis (as shown in Figs. 1 and 4).

As applied to claims 30-34, August et al teach the pin connection between each PCB's therefore the pin is capable for transmitting signal between each PCB therefrom. Noted that the pin connection disclosed by August et al is broadly readable as the optical connection and its function intended use such as transmitting signals, etc., as claimed by the instant invention.

As applied to claims 37-40, August et al also teach pass through sockets 105a, 105b (as shown in the related embodiment of Fig. 2) recited in claims 37-38 and that as recited in claim 39-40 (see Fig. 1)

Limitations of claims 39-40 are met by August et al as discussed above.

As applied to each of claim 31-35, August et al teach the aligning the first and the second board by the through holes 108 (see Fig. 1 and the discussion at col. 2, lines 63-68 and col. 4, lines 30-37).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claims 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over August et al (US 4,911,645).

It would have been an obvious matter of design choice to choose any desired PCB configurations such as one having characteristics as OC-192 transmit module or the like since applicant has not disclosed that the PCB is an OC-192 module is critical, patentably distinguishing feature and it appears that the invention would perform equally well with the teaching where the PCB is being formed as Zip module as disclosed by the August reference (see August's Figs. 1 and 4).

10. Claims 36 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over August et al (US 4,911,645) in view of Imamura (5,219,292).

As applied to claims 36 and 46-48. Noting August et al teach away from the zero height between the PCB's and the means for inserting pin as to form an integral structure. Imamura discloses the above (se Figs. 2-4, depicts the zero height between the PCB's 13-14 and the means for inserting as to form an interconnection 12 (see Fig. 3). Therefore, it would have been obvious to one having ordinary skill in the art at the

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time of the invention was made to employ the Imamura's teaching as described above onto the invention of August et al as so to provide a interconnection between multi structure such as PCB's, etc.

Limitations of claims 46-48 are also met as the above discussion.

Prior Art References

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art references are cited for their teaching of System for interconnecting printed circuit board (PCB).

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (571) 272-4569. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mt
2/1/06


MINH TRINH
PRIMARY EXAMINER